

OF THE NATIONAL ACADEMIES

Cooperative Research Programs Security Research Status Report

September 11, 2007

Since September 11, 2001, 90 security-related projects have been authorized in the Cooperative Research Programs: 57 of these projects have been completed; 21 projects are in progress; and 12 projects have contracts pending or are currently in development. This report provides information on over \$8 million of formally coordinated TCRP and NCHRP security-related research, as well as information on about \$3 million in security-related projects developed under other initiatives managed under the Cooperative Research Programs, including Transit IDEA; legal studies; international studies; planning; Airport CRP; Hazardous Materials CRP; National Cooperative Freight Research Program; and the Commercial Truck and Bus Safety Synthesis Program.

Capsule descriptions of products and links to a variety of security related products produced by the Transportation Research Board (TRB), other divisions of the National Academies, and other transportation research organizations can be found on the web page **Transportation Research Board and National Academies' Security Related Products and Links** (www.TRB.org/NASecurityProducts):

- TRB Security Related Publications—TRB-published reports at TRB.org/SecurityPubs
- TRB Cooperative Research Programs Security Research Status Report--Updated Monthly (in PDF)
- Transportation Security: A Summary of Transportation Research Board Activities—Updated Monthly (slideshow in PDF)
- TRB Transportation System Security Website
- Key Hazards and Security Products of The National Academies -- Updated Monthly (in MS Word, with live links)
- <u>Slides Hazards and Security Activities of the National Academies</u>—(28 MB in PowerPoint w/ live links)
- <u>Transportation Security Information Contained in TRB's Transportation Research Information</u> Services Database
- Transportation Security Research in Progress
- <u>Select Non-TRB Transportation Security Information</u>—Material Highlighted in past TRB E-Newsletters

Emergencies arising from terrorist threats highlight the need for transportation managers to minimize the vulnerability of people and assets through incident prevention, mitigation, preparedness, response, and recovery. Managers are seeking to reduce the chances that transportation vehicles and facilities are targets or instruments of terrorist attacks and to be prepared to respond to and recover from such possibilities. Work under the Cooperative Research Programs is designed to assist transportation agencies in adopting the National Incident Management System (NIMS). In his September 8, 2004, letter to state governors, DHS Secretary Tom Ridge wrote that "NIMS provides a consistent nationwide approach for Federal, State, territorial, tribal, and local governments to work effectively and efficiently together to prepare for, prevent, respond to, and recover from domestic incidents, regardless of cause, size, or complexity."

The American Association of State Highway and Transportation Officials (AASHTO) Special Committee on Transportation Security and the American Public Transportation Association (APTA) Executive Committee Security Affairs Steering Committee provide steering direction to the coordinated CRP Security Research under NCHRP and TCRP, respectively. A technical panel provides all hazards, all modes oversight and project selection guidance through NCHRP Project Panel 20-59, Surface Transportation Security Research.

Project	Budget	Status	Description
ACRP (Airport Cooperative Research P	rogram)		
4-04 Exercising Command-Level Decision Making for Critical Incidents at Airports Reserve for workshops	\$400,000	Contract pending	Create an affordable, NIMS-compliant training and exercise system for individuals and jurisdictions to use (a) in basic, remedial, and annual training and (b) in critical incident decision making to help meet the requirements of CFR Part 139.
5-01 Guidance for Developing Regionally-Coordinated Airport Emergency Plans for CBRNE Events	\$250,000	Contractor's Final Report anticipated February 2008	Provide guidance for developing regionally-coordinated airport emergency plans for events involving chemical, biological or radiological (CBR) agents, or detonation of nuclear or explosive devices.
6-01 Airport and Air Carrier Resource Manual: Employees Coping with Traumatic Events	\$300,000	Contract pending	Develop a resource manual of human-impact considerations and practices for airport and air carrier managers related to human-made accidents or attacks, or natural disaster events.
11-02 Task 5, Quarantine Facilities for Arriving Air Travelers: Identification of Planning Needs and Costs	\$ 50,000	Contractor's Draft Report rec'd June 2007	Identify needs and associated costs to safely and effectively receive, quarantine, and care for up to several hundred arriving air travelers.
11-03 Topic S04-01, General Aviation Safety Management and Security Practices	\$ 30,000	Complete May 2007	Reviews resources used by the general aviation community in the development of safety & security programs, funding sources and issues that determine the amount of money spent on such programs, and current practices that GA airports use to keep their facilities safe and secure. ACRP Synthesis 3, General Aviation Safety and Security Practices
CTBSSP (Commercial Truck & Bus Saf	ety Synthe	sis Program)	
CTBSSP-1 Security Measures in the Commercial Trucking and Bus Industries	\$ 40,000	Complete April 2003	Review and summary of terrorist-related security status and needs of the trucking and commercial bus industries. Commercial Truck and Bus Safety Synthesis 2: Security Measures in the Commercial Trucking and Bus Industries
HMCRP (Hazardous Materials Coopera	tive Resea	rch Program)	
HM-03 Assessing Local Emergency Response Needs and Capabilities	\$350,000		Develop guidance for conducting assessments of local emergency response needs and capabilities for hazardous materials releases.
HM-04 Emerging Technologies for Safe and Secure Transportation of Hazardous Materials	\$350,000	Contract pending	Develop a candidate list of near- and longer-term technologies for use in enhancing the safety & security of hazardous materials transportation; identify emerging technologies; and identify potential impediments to and opportunities for development, deployment & maintenance
TCRP (Transit Cooperative Research P	rogram)		
J-3 (Spring 2002) Safety and Security Issues at All-Bus Systems in Small- to Medium-Sized Cities in Western Europe: International Transit Studies Program	\$162,500	Complete June 2002	Brief report includes transportation information on the cities and facilities visited, lessons learned, and discussions of policies and practices that could be applied in the United States. TCRP Research Results Digest 58: Safety and Security Issues at All-Bus Systems in Small- to Medium-Sized Cities in Western Europe
J-4 Transit IDEA Project 35 Innovative Bioterrorism Detection Technology for Transit Security	\$ 82,000	Complete August 2005	Conduct tests of an innovative detection technology that has shown preliminary promise for real time detection of biological organisms
J-4 Transit IDEA Project 37 Bandwidth Expansion and Real-Time Surveillance for Security on Transit Buses	\$ 81,000	Complete May 2005	Develop and test enhanced real-time surveillance technology for security on transit buses, including remote viewing, monitoring, and alerting functions at a central control room
J-4 Transit IDEA Project 40 Counter Terrorism Chemical Detector for Rail Transit Systems	\$ 80,000	Complete December 2005	Develop and design a prototype technology to detect chemical agents in subway stations and rail cars.

Project	Budget	Status	Description
TCRP (Transit Cooperative Research P	rogram)		
J-4 Transit IDEA Project 42 Detection of Radioactivity in Transit Stations	\$ 81,000	Complete October 2006	Develop and test a prototype system to enable the use of "charge coupled device" (CCD) security cameras to detect and identify the nature of ambient radioactivity levels and nearby radioactive materials, particularly dirty bombs.
J-4 Transit IDEA Project 45 Chemical and Biological Decontamination System for Rail Transit Facilities	\$ 79,500	Complete January 2007	Developing and designing a prototype system to deliver decontamination solutions in subway stations.
J-4 Transit IDEA Project 48 Biometric Notification Network for Transit Employees	\$ 80,000	Contractor's Final Report anticipated May 2008	Develop and test a prototype biometric notification network for transit employees, contractors, and vendors. System to provide transit officials with real-time notification of biometric ID card use.
J-4 Transit IDEA Project 53 Ultraviolet Germicidal Irradiation for Transit Buses	\$ 72,000	Contractor's Final Report anticipated April 2008	Design, install, test, and evaluate UVGI for elimination of viruses, bacteria, mold, fungi, and airborne pathogens on transit buses. Evaluate impact on maintenance costs of bus air conditioning systems by use of UVGI.
J-4 Transit IDEA Project 54 Detection of Radioactivity in Transit Stations—Phase II	\$ 79,000	Contractor's Final Report anticipated August 2008	Develop and test a prototype system to enable the use of "charge coupled device" (CCD) security cameras to detect and identify the nature of ambient radioactivity levels and nearby radioactive materials, particularly dirty bombs.
J-5 Topic 7-01 Transit Security Versus Civil Rights	\$ 25,000	Complete March 2005	Legal Research Digest 20, Transit Passengers and Civil Rights
J-5 Topic 10-03 Security and Government Competitive Bid Requirement	\$ 25,000	In development	A review of pertinent legislation, regulations, and case studies with reference to the extent existing programs assist transit agencies in protecting sensitive documents
J-6, Task 60 The Case for Searches in Public Transportation	\$ 30,000	Complete July 2005	Legal Research Digest 22, The Case for Searches on Public Transportation
J-6, Task 67 Strategic Assessment of Wireless Capabilities and Needs for the Public Transportation Industry	\$100,000 \$225,000	Contractor's Final Report ant. October 2007	J-6/Task 67: develop a profile of current radio-frequency and wireless-data usage for the transit industry and assess future needs. Possible follow-on project C-18.
J-6, Task 70 Security Standards and Guidelines Pertinent to Public Transportation	\$ 50,000	Contract pending	Identify and categorize security standards and guidelines pertinent to public transportation, and format them in a tool supportive of standards development activities
J-7 Topic SF-13 Improving Transit Security Update	\$ 25,000	In development	An update of TCRP Synthesis 21, <i>Improving Transit Security</i> (1997). This synthesis will document state of the practice to include anti-terrorism techniques.
J-10(1) Transit Security Roundtables	\$330,000	Complete December 2002	Brief report on four roundtables on public transportation security held January-May 2002. Final report delivered to APTA December 2002.
J-10(2) Security White Papers	\$ 20,000	Complete August 2002	Briefs: 1) on decontamination procedures after chem/bio/rad events; 2) technology clearinghouse options. Contractor's final reports delivered to APTA August 2002.
Security Resources	\$ 5,000	Complete April 2003	Published as TCRP Research Results Digest 59: A Guide to Public Transportation Security Resources
J-10(4) International Transportation Associations Transit Security Summit	\$ 20,000	Complete September 2002	More than 60 participants from Belgium, Canada, France, Mexico, Spain, United Kingdom, and United States
J-10A(1) Update of Federal Transit Admin. Transit System Security Program Planning Guide and Transit Security Handbook	\$150,000	Complete August 2002	Contractor's final report and companion CD delivered to FTA August 2002. On FTA web site as <i>The Public Transportation System Security and Emergency Preparedness Planning Guide</i> .
J-10A(2) Security-Related Training and Customer Communications	\$400,000	Complete December 2003	TCRP Report 86, Public Transportation Security, Volume 5: Security-Related Customer Communications and Training for Public Transportation Providers
J-10A(3) Intrusion Detection for Public Transportation Facilities	\$250,000	Complete March 2003	Technologies and security practices for detecting and prosecuting intruders. TCRP Report 86, Public Transportation Security, Volume 4: Intrusion Detection for Public Transportation Facilities Handbook

Project	Budget	Status	Description
TCRP (Transit Cooperative Research P	rogram)		
J-10A(4) Scan for Tools for Evaluating and Prioritizing Anti-Terrorist Security Measures for Transit Applications	-	Complete June 2003	To determine whether the development of transit-specific tools for prioritizing security measures is necessary or appropriate for transit systems.
J-10B(1) Emergency Response Mobilization Strategies and Guidelines for Transit	\$400,000	Complete April 2004	Public transportation's role in emergency evacuation and providing staging support for emergency responders. TCRP Report 86, Public Transportation Security, Volume 7: Public Transportation Emergency Mobilization and Emergency Operations Guide
J-10B(2) Use of Portable Explosive Detection Devices	\$200,000	Complete February 2004	TCRP Report 86, Public Transportation Security, Volume 6: Applicability of Portable Explosive Detection Devices in Transit Environments
J-10B(3) Robotic Devices	\$ 20,000	Complete December 2002	Evaluation of literature on use of robotic devices in public transportation environments, drawing on TSWG research. TCRP Report 86, Public Transportation Security, Volume 3: Robotic Devices: A Guide for the Transit Environment
J-10B(4) Communication of Threats	\$ 20,000	Complete June 2002	Guidelines for peer exchange of security threats among public transportation providers. TCRP Report 86, Public Transportation Security, Volume 1: Communication of Threats: A Guide
J-10B(5) Transit Use of Dogs	\$ 15,000	Complete June 2002	Primer on use for security patrols, explosives detection, and chem/bio detection. TCRP Report 86, Public Transportation Security, Volume 2: K9 Units in Public Transportation: A Guide for Decision Makers
J-10C Guidelines for Transportation Emergency Training Drills and Exercises Co-funded by NCHRP 20-59(18)	\$100,000	Complete October 2005	For use by transportation systems and emergency responders in the planning, design, development, implementation, and evaluation of drills and exercises. NCHRP Report 525/TCRP Report 86, Vol. 9, Guidelines for Transportation Emergency Training Exercises
J-10D Developing and Updating Security Plans: A Pilot Course for Rural and Community-based Public Transportation Systems	\$200,000	Complete August 2005	TCRP Report 86, Public Transportation Security, Volume 10: Hazard and Security Plan Workshop Instructor Guide for Rural, Small Urban, and Community-Based Public Transportation System Operations.
J-10E A Guide to Transportation and Hazards Resources Co-funded by NCHRP 20-59(24).	\$ 37,500	Contractor's Final Report anticipated February 2008	Security-related research and resources, and an introduction to interdisciplinary research and applications undertaken by the hazards research community.
J-10F Transportation Agency Continuity of Operations Plans Co-funded by NCHRP 20-59(21).	\$100,000	Complete May 2005	Guidance for efficiently resuming transportation agency operations following a terrorist attack or other natural or man-made disasters. NCHRP Report 525/TCRP Report 86, Vol. 8, Continuity of Operations (COOP) Planning Guidelines for Transportation Agencies
J-10G Making Transportation Tunnels Safe and Secure Co-funded by NCHRP 20-67.	\$200,000	Complete June 2006	Mitigation countermeasures are presented for (a) threats related to crime and terrorism and (b) hazards related to natural events. NCHRP Report 525/TCRP Report 86, Vol. 12, Making Transportation Tunnels Safe and Secure
J-10H Security Measures for Ferry Systems	\$150,000	Complete February 2006	Provide guidance on risk assessment approaches and on security measures. TCRP Report 86, Vol. 11, Security Measures for Ferry Systems
J-10J Public Transportation Passenger Security Inspections: A Guide for Decision Makers	\$100,000	Complete February 2007	Guidance that a public transportation agency may use when considering whether to introduce a passenger security inspection program into its operations. Publication pending.
NCHRP (National Cooperative Highway	Research	Program)	
3-63 Assessment of Sharing Information Between Public Safety and Transportation Agencies for Traffic-Incident Management	\$200,000	Complete April 2004	Presents lessons learned from around the country. NCHRP Report 520, Sharing Information between Public Safety and Transportation Agencies for Traffic Incident Management.

Project	Budget	Status	Description
NCHRP (National Cooperative Highway	Research	Program)	
8-36 (34) Incorporating Security into the Transportation Planning Process: Research for the AASHTO Standing Committee on Planning	\$ 50,000	Complete June 2004	Documents strategies, processes, and practices. NCHRP Report 525 Vol. 3, Incorporating Security into the Transportation Planning Process
8-36 (53) / 20-59(27) Peer Review of Disaster Response Issues in Transportation Planning		Contractor's Final Report ant. September 2007	A peer review session bringing together several state and MPO planning directors to discuss priority issues in security, disaster response, and planning.
12-72 Blast-Resistant Highway Bridges: Design and Detailing Guidelines	\$950,000	Contractor's Final Report ant. June 2008	The objective of this project is to develop design guidance for improving the structural performance and resistance to explosive effects of new and existing bridges.
20-5 Topic 39-5 Emergency Evacuation and Repopulation	\$ 30,000	In development	NCHRP Project 20-5, "Synthesis of Information Related to Highway Problems." A comprehensive and systematic review of current practice for evacuation and repopulation, considering the use of modes for low-mobility individuals.
20-6 Topic 13-2 Contracting Procedures During War or a Disaster	\$ 25,000	Complete June 2007	NCHRP Project 20-6, "Legal Problems Arising Out of Highway Programs" provides authoritatively researched, specific, limited-scope studies of legal issues and problems having national significance and application. Publication pending.
20-7 Task 151A A Guide to Updating Highway Emergency Response Plans for Terrorist Attacks	\$100,000	Complete May 2002	Planning guidance for state departments of transportation incorporates the Incident Command System. Available on AASHTO web site.
20-7 Task 151B A Guide to Highway Vulnerability Assessment	\$100,000	Complete May 2002	Guidance for state departments of transportation to identify vulnerable facilities and appropriate countermeasures. Available on AASHTO web site.
20-7 Task 151C Transportation Security: Sharing Information & Task Force Support	\$ 50,000	Complete Continuing under 20-59(14)	Support for the AASHTO Task Force on Transportation Security
20-7 Task 181 Multi-State Transportation Operations Program: Status and Critical Issues	\$ 50,000	Complete October 2004	June 2004 workshop provides a critical review in the development of a briefing document and presentation; shared with appropriate TRB, AASHTO, and ITE executives and committees
20-7 Task 230 Safety and Security in Roadway Tunnels	\$ 45,000	Contract pending	Hold a workshop to identify the scope of the issues, outline needed research, and identify funding means for underground transportation system initiatives and practices. Prepare a report.
20-7 Task 239 Identification and Delineation of Incident Management and Multi-Agency Emergency Response Functions	\$ 25,000	pending	Define, compare, and contrast the functions associated with (a) day-to-day incident management activities and (b) multi-agency emergency response activities in order to define and target state DOT job functions, research, training, and committee related activities
Workshops and Forums	\$100,000	Complete April 2003	Identification and prioritization of a research agenda for state DOTs, US DOT, and NCHRP Phase 1 report (April 2002) on AASHTO web site. Phase 2 workshop support complete April 2003.
Infrastructure Vulnerability Workshops	\$277,000	Complete June 2004	Regional, interactive workshops: NY, TX, CA. NCHRP Report 525 Vol. 4, A Self-Study Course on Terrorism- Related Risk Management of Highway Infrastructure
20-59(3) Blue Ribbon Panel on Bridge and Tunnel Security	\$128,200	Complete September 2003	Expert group meeting and establishing guidelines (includes \$63,200 from FHWA). Available on AASHTO web site.
20-59(4) White Paper on Highway Security Issues for Reauthorization	\$ 25,000	Complete April 2002	Transportation reauthorization recommendation changes due to new security needs. Contractor's final report delivered to AASHTO April 2002
20-59(5) National Needs Assessment for Ensuring Transportation Infrastructure Security	\$150,000	Complete December 2002	Transportation facilities needs assessment, with recommendations to meet new security needs. Contractor's final report is on AASHTO web site.

Project	Budget	Status	Description
NCHRP (National Cooperative Highway	Research	Program)	
20-59(6) State DOT Field Personnel Security Manual	\$ 50,000	Complete October 2003	Guidance for DOT field personnel as stand-alone document. NCHRP Report 525 Vol. 1, Responding to Threats: A Field Personnel Manual
20-59(6A) State DOT Field Personnel Security Training CDs	\$150,000	1 st Final Report received December 2005	Two stand-alone CD-ROM based training programs for self-instruction. NCHRP Report 525 Vol. 7, System Security Awareness for Transportation Employees
20-59(6B) Enhanced DOT Participation in NTI Train-the-Trainer Workshops for Security Awareness	\$100,000	Training available through August 2008	National Transit Institute training for several modes is available by direct delivery and in train-the-trainer versions.
20-59(7) Transportation Security Information Clearinghouse 20-59(7A) Support to Panel in Developing ISAC Recommendations	\$125,000 \$ 25,000	Complete February 2006	Development and one year of operation of a web-based clearinghouse for transportation security information. 20-59(7/Task 1) TSIC Outreach & Support cancelled.
20-59(8) Emergency Transportation Operations Preparedness and Response Workshop: Adaptations for Rural and International Border Crossing Situations	\$195,000	Complete January 2004	Regional, interactive workshops: WA, NM, MN, ID Contractor's final report delivered to AASHTO February 2004
20-59(9) Methods for Determining Transportation and Economic Consequences of Terrorist Attacks	\$250,000	Complete October 2005	NCHRP Report 52 Volume 11, Disruption Impact Estimating Tool—Transportation (DIETT): A Tool for Prioritizing High-Value Transportation Choke Points
20-59(10) Secure Communication Infrastructure	\$378,600	Complete April 2004	NCHRP Report 525 Vol. 2, Information Sharing and Analysis Centers: Overview and Supporting Software Features
(ETO) Management	\$350,000	Complete February 2005	Guidance for state DOTs to coordinate activities with law enforcement, fire service, and emergency management. NCHRP Report 525 Vol. 6, Guide for Emergency Transportation Operations
Planning	\$100,000 \$5,000	Complete January 2007	A workshop was held in March 2006. Contractor's final report and brochure delivered to AASHTO February 2007.
20-59(12) Follow-up Security and Emergency Response Survey of State Transportation Agencies	\$ 500	Complete August 2004	2003 follow-up to the TRB/AASHTO November 2001 Security and Emergency Response Survey of State Transportation Agencies.
20-59(13A) Follow-up on A Guide to Updating Emergency Response Plans for Terrorist Incidents	\$ 6,000	Complete November 2003	Comments on 20-7/151A A Guide to Updating Highway Emergency Response Plans for Terrorist Attacks
Highway Vulnerability Assessment for Critical Asset Identification & Protection	\$ 35,000	Complete June 2004	User comments on Project 20-7/151B, including those stimulated by a presentation and a half-day workshop conducted under this project.
Special Committee on Transportation Security	\$285,000	Ongoing	(continuation of 20-7/151C). NCHRP Report 525 Vol. 5, Guidance for Transportation Agencies on Managing Sensitive Information.
20-59(15) AASHTO Modifications of Consultant Reports	\$100,000	In development	Editorial support for converting consultant reports to AASHTO publications
Materials: Outreach	\$ 50,000	Complete January 2005	Materials for communicating specifically to federal agencies outside the FHWA. To AASHTO, January 2005.
Materials: Funding Guide	\$ 50,000	Complete October 2004	Materials for communicating funding opportunities to state transportation agencies. Final report on AASHTO website.
Fundamentals of Transportation Security for DOTs	\$ 100,000	Contractor's Final Report anticipated October 2007	Compelling, understandable materials to effectively communicate to state DOT leadership (a) goals for transportation security and (b) fundamental actions that state transportation agencies can take and have taken.
Multi-modal Transportation Infrastructure	\$400,000	Contractor's Final Report anticipated December 2007	A methodology for mainstreaming an integrated, high level, all-hazard, National Incident Management System (NIMS)-responsive, multi-modal risk management process into major transportation agency programs and activities.
Emergency Training Drills and Exercises	\$100,000	Complete October 2005	For planning, design, development, implementation, and evaluation of drills and exercises. NCHRP Report 525/TCRP Report 86, Vol. 9, Guidelines for Transportation
20-59(18) Guidelines for Transportation Emergency Training Drills and Exercises Co-funded by TCRP J-10C	\$100,000	December 2007 Complete	into major transportation ag For planning, design, develor evaluation of drills and exer

Program)	
Program)	
Complete October 2005	Technical information on chemical, biological, and radiological threats; vulnerabilities of the transportation system to these agents; consequence-minimization actions that may be taken. Includes a software tool, user's guide, and executive briefing slides. NCHRP Report 525, Vol. 10, A Guide to Transportation's Role in Public Health Disasters
Cancelled December 2003	Develop a framework/guide/service for use by the transportation community and others to prepare for the purchase or management of interoperable communications /data transmission systems and networks. Cancelled due to overlap with FHWA.
Complete May 2005	Develop guidance for efficiently resuming transportation agency operations following a terrorist attack or other natural or man-made disasters. NCHRP Report 525/TCRP Report 86, Vol. 8, Continuity of Operations (COOP) Planning Guidelines for Transportation Agencies
Contractor's Final Report anticipated December 2007	Establish recommended practices and procedures for emergency quarantine and isolation controls for local and state roads with minimal resources typical for a rural region.
Contractor's Final Report anticipated August 2008	Develop a recommended Guide for use by state transportation agencies in planning and developing their organizational functions, roles, and responsibilities for emergency response within the all-hazards NIMS context.
Contractor's Final Report anticipated February 2008	Security-related research and resources, and an introduction to interdisciplinary research and applications undertaken by the hazards research community.
Contractor's	Develop a recommended 3-year security research plan for consideration by the AASHTO Special Committee on Transportation Security.
	Update of the 2002 transportation facilities needs assessment, with recommendations to meet new security needs.
Contractor's Final Report ant. September 2007	A peer review session bringing together several state and MPO planning directors to discuss priority issues in security, disaster response, and planning.
Contractor's Final Report ant. October 2007	
In development	Recommendations for institutionalizing security elements into transportation (e.g., training, workshops, peer exchanges. Panel to meet in 2008.
Contractor's Final Report anticipated December 2007	Identify best internal/ external state planning, response, and recovery policies and practices pertaining to weather-related emergencies, emphasizing state public transportation and state passenger rail div. involvement
Complete June 2006	Mitigation countermeasures are presented for (a) threats related to crime and terrorism and (b) hazards related to natural events. NCHRP Report 525/TCRP Report 86, Vol. 12, Making Transportation Tunnels Safe and Secure
-	Final Report anticipated December 2007 Complete

Updated September 11, 2007

THE NATIONAL ACADEMIES Advisers to the Nation on Science, Engineering, and Medicine

S. A. Parker, Senior Program Officer Transportation Research Board 500 Fifth Street NW Washington, DC 20001 202-334-2554 saparker@nas.edu